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# GEOGRAPHICAL NOTES.

British and American Archæological Society of Rome.—This society, founded in 1865, mainly through the exertions of Mr. Drury Fortnum, F.S.A., has contributed, though in but a limited degree, to the exploration of the Roman remains. The late Mr. J. H. Parker, the well-known archæologist, was its most active member during the years 1871–1875; and an exploration fund raised by the members was the means of revealing the site and the ruins of the Porta Capena.

The objects of the association are to concentrate and assist the researches of English and American antiquaries in Rome, and to furnish information and means of study to visitors who interest themselves in archæology. Its collections of books, photographs, and drawings are already of considerable value, and the society is now making an effort to establish itself on a solid basis, in order to extend its sphere of usefulness.

According to the new rules adopted, the society is to consist of members and associates, the former being its permanent constituents, the latter enrolled for the season only. None will be chosen members but those who have some claim to the title of archæologists, and who may be capable, whether present in person or not, of furthering the objects of the organization.

It is the wish of the Council to enroll among the members antiquaries who have made a study of classical antiquities, and to raise, also, by donations, a small fund in aid of the library and collections.

Earl Percy has been elected President, and among the Vice-Presidents are the British Ambassador and the American Minister.

The yearly subscription for members and associates is 25 francs. Donations and subscriptions may be sent to the Hon. Secretary, the Cav. Arthur Strutt, 81 Via della Croce, or to the Treasurer, I. C. Hooker, Esq. (Maquay, Hooker, & Co., bankers), 20 Piazza di Spagna, Rome.

PROPOSED NEW ROUTE *via* HUDSON'S BAY AND STRAIT TO THE GREAT PRAIRIE LANDS OF CANADA.—At the Birmingham meeting of the British Association for the Advancement of Science the advantages and disadvantages of this new route were very fully discussed. Mr. Hugh Sutherland believed that the route would be the natural outlet for the trade of Minnesota, Dakota, Montana, and Wyoming, as well as for that of the whole of the Dominion of Canada west of Ontario. He foresaw, moreover, an immense development of the salmon, seal, and whale fisheries of the Bay itself, and of the vast resources in timber and minerals of the coast regions.

Dr. John Rae took a less hopeful view of the project. The results of his experience and study, as published *in extenso* in the *Scottish Geographical Magazine* for December, are :

1st. That the only apparent advantage of the route would be the shortening of the distance by 400 or 500 miles (more or less) to Liverpool, according to the position on the prairies from which the measurements began. This difference of distance would occupy a loaded steamer not more than two days; but this apparent gain would be more than counterbalanced by a probable average detention by the obstruction of three or four days on each voyage.

2d. That the disadvantages are, the short time—three, or three and a half months—each season, during which Hudson Strait is sufficiently open to be navigable; and the danger to long and large heavily-laden steamers, if caught by a "nip," in the ice-pack.

The length of the Strait is 400 miles, and Lieut. Gordon, who was there in the *Alert* in 1885, says in his Report: "The date (for the passage) for this year I place at from July 5th to 15th, as it is more than likely that a ship could have got *through the Strait in ten days.*" Further on, he adds: "The information we have got would point to the months of July, August, September, and October as being the months in which the Strait is passable. As a rule, in July there would be delays."

Dr. Rae, whose personal acquaintance with the navigation of the Strait goes back to the year 1833, cuts off from Lieut. Gordon's estimate the first two weeks of July and the last two of October; and he notes two occasions, one in July–August, 1833, the other in Sept., 1854, on which his vessel was entirely closed in by ice, so that it became a question whether the voyage should be given up as hopeless.

The passage through Hudson Strait is the insurmountable obstacle in the way of the new route.

THE PANAMA CANAL IN ROME.—The *Bollettino* of the Italian Geographical Society, for November, 1886, takes from the *New York Herald* a report on the progress of the Panama Canal made by Mr. Nathan Appleton, "Agent of the United States of America (accredited) to the Panama Canal Company."

According to this Italian version, which is not consistent with itself, there remain to be extracted 10,000,000 cubic metres, so that the Canal ought to be opened to the commerce of the world not later than September, 1887; the rate of progress being, on the authority of the Bulletin published by the Company, 1,000,000 cubic metres per month.

The American Government does not seem to know that there is an "Agent of the United States of America in, or near, or about the Panama Canal Company"; but all roads lead to Rome, and some very curious intelligence gets there.

The *Bollettino* is, however, mistaken in announcing that Mr. Appleton's Report will be published in the "BULLETIN" of this Society. Work so well done in Italian need not be repeated in English.

THE GULF STREAM AND THE CLIMATE OF NORWAY.—*Nature*, of Nov. 25, 1886, gives the results arrived at by Dr. Karl Hesselberg, a Norwegian scientist, from his study of this subject.

Looking only at its latitude, Norway should have, in the north, a Polar climate, with eternal ice and snow, and elsewhere a relatively severe temperature. Nothing of this is true. Taking it throughout, the climate of Norway is, on the whole, one of the most favorable on the globe. The character of it is rather insular than continental, the winds blowing throughout the year from the southwest, and warm sea-currents washing the shores.

The chart of the atmospheric depression in the North Atlantic shows for the whole year a strong barometric minimum in the middle of the sea surrounded by Norway, Iceland, Jan Mayen, and Spitzbergen. This creates southwest winds and forces warm water towards Norway and Spitzbergen. The bed of the sea is so formed as to aid in keeping the high temperature. The basin west of Norway is about 2,000 fathoms deep, but the slope into this basin from the shore is very gradual, and the icy cold water which fills the bottom is kept off by the bank and never reaches the Norwegian coast, so that the fjords, which penetrate the land so deeply, do not freeze.

Dr. Hesselberg shows the mean temperature of the air over Europe and the North Atlantic in January. The isotherm 0°—presumably Centigrade, though *Nature* does not state it,—instead of running east and west, goes nearly straight north and south, particularly along the west coast of Norway, which it follows throughout its length from Tromsö, between 69° and 70°, to Christiansand, at about 58°. From Christiansand it turns towards Denmark, thence to the Baltic, comes back to Hamburg, and runs thence in a southeasterly direction across Europe nearly to the Adriatic. Here it first turns to the east, across Turkey and the Black Sea, so that the mean temperature of January on the Norwegian coast, at nearly 70° N. Lat., is the same as in Southern Europe, at nearly 45°.

It seems proper to add that *Nature*, in speaking of the "entire" length of the Norwegian coast from Tromsö to Christiansand, virtually makes Dr. Hesselberg responsible for its own error of nearly two degrees.

Tierra del Fuego.—Don Ramon Lista, Secretary of the Argentine Geographical Society, left Buenos Aires on the 31st October, 1886, in charge of an expedition fitted out by the government for the exploration of Tierra del Fuego, now partly Argentine territory.

Of recent expeditions to this far-away region, the Italian, conducted by Lieut. Bove, met with disaster and had to be abandoned; and the French mission of 1882 to Cape Horn was undertaken for the establishment of an International Circumpolar Station, and made but incidental explorations.

Señor Lista, in his preliminary letter to President Mitre, expresses the hope of finding in the main island considerable mineral deposits, more especially of coal, besides valuable timber in the forests.

The first report received gives a general outline of the march from San Sebastian Bay to the Bay of Thétys, five miles to the west of Cape San Diego, the southeastern point of Tierra del Fuego. This region the explorer divides into two parts. The northern, from Cape Espiritu Santo at the entrance of the Strait of Magellan to the Cabo de Peñas, is composed of valleys, where admirable pastures are watered by considerable streams that flow from the snowy ranges of the interior. The temperature is agreeable, and the winter snows are light, to judge from the comparative dryness of the soil. South of this pasture land are the Antarctic forests, where the streams are smaller and the open spaces not frequent, while a certain Swiss character is given to the scenery by the mountains, with their numerous small lakes and beautiful woods.

It will be some time before fuller accounts can be had from the expedition, but a lecture delivered just before its departure from Buenos Aires by the Rev. Thomas Bridges, for twenty-five years a missionary among the Fuegians, furnishes some interesting facts concerning the people and their country.

Tierra del Fuego is properly an archipelago, composed of many large and innumerable small islands. The whole country is mountainous, though there are broad plains in the north. The largest island, named Onisin, from the Ona tribe of Indians, has in its southern part many glaciers and very extensive forests. North of these mountains the climate is comparatively dry, with a colder winter and a hotter summer than elsewhere in the island. The principal inconvenience of the Fuegian climate in general is the lack of summer heat. The highest temperature observed at Usuaia, the missionary station on Beagle Channel, was 70° Fahrenheit, and the thermometer never goes below 12° in winter.

In the central and eastern parts of the archipelago there are four months of hard frosts, while in the west, where the climate is excessively moist, frost is almost unknown, and the fuchsia grows in the open air to a height of sixteen feet, and flowers profusely.

At Usuaia the variations in temperature are sudden and great. Mr. Bridges has known three consecutive frosts at the end of December and snow in January, the midsummer of the southern hemisphere.

There are but five kinds of trees in the woods: three varieties of beech, a magnolia, and the Fuegian cypress. Two of the beeches are noble trees, often eighty feet in height and six feet in diameter; the third, though never so large, furnishes, like the others, an excellent timber. The cypress and the magnolia have no especial value.

There are three tribes among the Fuegians—the Onas, the Yahgans, and the Aluculufs. It is difficult to arrive at an estimate of their numbers, but Mr. Bridges inclines to think that, all told, they are less than 1,200. The Yahgans, now barely 400, were about 3,000 in number forty years ago, and have been reduced to their present feeble condition by disease, principally pulmonary affections and small-pox.

It is among these people that Mr. Bridges has labored, and he reports that they have made some progress in the arts of civilization, and some acquaintance with the precepts of Christianity. They have built themselves houses and roads, and a school has been established among them. They seem, nevertheless, to have remained substantially in the condition in which the missionaries found them; and their ideas as to the hereafter and the immortality of the soul are extremely vague and confused.

There is no settled custom as to marriage. Polygamy is practised, though circumstances would seem to be against it, and, though no woman has more than one husband at a time, some of them have been known to take more than ten in succession.

The division of labor between the sexes is, on the whole, equitable.

The men collect the wood, make the fire, build the boats, and do the hunting, while the women cook, draw the water, manage the canoes, and fish. It is not easy, however, to accept the statement that the women alone are swimmers.

The reason given is that, in many places on the coast, there are no trees to which the boats can be tied, so that the women, after landing the men, row to a spot where sea-weeds grow, fasten their boats, and swim back to their husbands. The explanation is more ingenious than the process.

Young people are brought up with care and receive a moral instruction ; but, unlike the youth of more favored climes, they display in their conduct a total disregard of the precepts inculcated.

When a Fuegian falls sick, he is well cared for, especially by the women, but if his case seems to be hopeless, his relatives put an end to him by strangulation, which they call *tabacana.*

The dead are wrapped in skins or branches of trees, and buried near the cabin, or else burned in some open place; the ashes being then scattered to the winds, or hidden in some remote crevice in the rocks.

THE ELEVATED ROAD IN BROADWAY.—It will interest New Yorkers to learn from a work of Mr. Louis Figuier's, quoted in the *Gazette Géographique* of Nov. 4, 1886, that the elevated road which runs through Broadway is supported on columns placed, not on the roadway, but on the edges of the sidewalks.

It was an act of delicate consideration on the part of the *Gazette* and of M. Figuier to make this arrangement, the rather that the elevated road in Broadway and its sustaining columns have no existence in fact.

*Tant pis pour les faits.*

DENSITY OF POPULATION.—A study on this subject by M. J. Du Fief is published in the *Bulletin* of the Belgian

Royal Geographical Society for November-December, 1886. The square kilometre used in these calculations is equal to 3861 of a square mile; or, in exact figures, 1,000 square kilometres are equal to 386.1161 square miles.

The population of the globe is estimated at 1,490,900,000, and the number of inabitants to a sq. kil. is 11.

Europe has a population of 341,714,000, with a density of 33.6 per sq. kil. The countries stand, in the order of their population, as follows:

| | Pop. | Per sq. kil. | | Pop. | Per sq. kil. |
|---|---|---|---|---|---|
| Russia | 90,333,000 | 16 | Switzerland | 2,846,000 | 69 |
| Germany | 46,845,000 | 87 | Bulgaria | 2,008,000 | 31 |
| Austria-Hungary | 38,770,000 | 62 | Greece | 1,979,000 | 30 |
| France | 37,672,000 | 71 | Denmark (Faroe & Iceland 83,000) | 1,969,000 | 51 |
| Great Britain | 37,241,000 | 117 | | | |
| Italy | 29,700,000 | 100 | Norway | 1,922,000 | 6 |
| Spain | 16,763,000 | 34 | Servia | 1,903,000 | 39 |
| Turkey | 6,642,000 | 25 | Montenegro | 236,000 | 26 |
| Belgium | 5,853,000 | 198 | Luxembourg | 213,000 | 82 |
| Roumania | 5,376,000 | 41 | Monaco | 12,500 | 577 |
| Sweden | 4,683,000 | 10 | Lichtenstein | 9,000 | 58 |
| Netherlands | 4,336,000 | 135 | San Marino | 8,000 | 94 |
| Portugal | 4,306,000 | 48 | Andorra | 5,800 | 13 |

The population of Asia is put at 800,900,000, with an average of 19 to the sq. kil. The Chinese Empire comes first with 409,904,000, and 34 per sq. kil.; then British India, with 256,400,000, and a density of 72 to the sq. kil.; then Indo-China, with 38,297,000, nearly half in the French colonies, and densities varying from 8 in Burmah and Siam to 91 in Tonkin and 113 in the Straits Settlements. Japan has a population of 36,700,000 and a density of 96. Russia in Asia has 16,146,000, with a density of 0.3 in Siberia and 17 in Transcaucasia and Armenia. Turkey in Asia has 15,824,000, and a density of 19; Persia 7,000,000, with 4 to the sq. kil.; Afghanistan 6,000,000 and Beluchistan 2,000,000, with a density for each of 8. The population of Arabia is put down at 5,535,000, but no estimate is made of the number to the sq. kil.

For Africa the population is set down at 205,000,000, and the density at 6 to the sq. kil., but M. Du Fief very justly remarks that, except in the case of a few European colonies, the figures for this continent are largely hypothetical. The estimate for Egypt—5,500,000—is certainly a sober one, and shows a density of 10 to the sq. kil.

America has 103,000,000 of people, with a density of 2.5 to the sq. kil. The countries rank:

| | Pop. | Per sq. kil. |
|---|---|---|
| United States of America . . . | 50,445,000 | 5.5 |
| Brazil . . . . | 12,300,000 | 1.4 |
| Mexico . . . . | 10,450,000 | 5 |
| West Indies . . | 4,751,200 | 19 |
| Dominion of Canada . . . . | 4,526,000 | 0.5 |
| United States of Colombia . . . | 3,000,000 | 3.6 |
| Peru . . . . . | 3,000,000 | 3 |
| Argentine Republic . . . . . | 2,950,000 | 1 |
| Central America . | 2,780,000 | 6 |
| Chili . . . . . | 2,440,000 | 3 |
| Bolivia . . . . | 2,300,000 | 1 |
| Venezuela . . . | 2,122,000 | 2 |
| Ecuador . . . . | 1,000,000 | 1.5 |
| Uruguay . . . | 560,000 | 3.3 |
| Paraguay . . . | 500,000 | 2 |
| Guiana . . . . | 366,000 | 0.7 |

The estimate of population for Greenland is 10,000; the area being of course an unknown quantity.

The total population of Oceania is estimated at 39,785,000. Of this number Malaysia has 34,675,000; a density of 17 to the sq. kil. The least density is 2, in Borneo, and the greatest 156, in Java.

In Polynesia the New Zealand Archipelago has a population of 606,000, which gives a density of 2. The highest average is in the Gilbert Islands, 93 to the sq. kil. In the Hawaiian group the density is 4.7 for a population of 80,600.

In Melanesia, Australia has a population of 2,598,000, and a density of 1.3 ; Tasmania 130,000, and a density of 1.9, and the Fiji Islands 128,000, an average of 6 to the sq. kil.

The greatest density in this division is 55, in New Britain, with a population of 100,000.

M. Du Fief's figures agree, for the most part, with those of the *Almanach de Gotha*, for 1887. The *Almanach*, however, makes the population of Russia in Europe 87,472,900, that of Austria-Hungary 37,882,712, and that of Spain 17,266,068 ; and the density one figure higher for Russia, and one lower for each of the others.

The two estimates were probably made from different data, both for time and area.

There is an error in the calculation for Bolivia. The country has an area of 1,297,000 sq. kil., with a population of 2,300,000, and the density is, therefore, not 1, but 1.8, nearly.

DR. TEN KATE IN SOUTH AMERICA.—This explorer left Europe in May, 1885, for the purpose of anthropological research in the northern part of South America, and especially in Guiana. For some months he travelled between the Upper Pará and the sea-coast, studying the various tribes and races and taking measurements, more curious than satisfactory, because he found the types everywhere very much mixed. The maroon negroes on the Saramacca, who have established an *imperium in imperio*, have lost a great deal of their originality. The same report is made of the Karbougros or, as they call themselves, Kalimas or Caribs, a tribe of mingled Indian and negro blood; of the Caribs on the Wayombo, and of the Arrowauks on the same river. These have kept up their ancient tribal institutions, analogous to those of the North American Indians. By the beginning of December, 1885, the traveller had secured detailed measurements of 106 individuals, Kalinas, Arrowauks, Karbougros, Maroon Negroes, and Hindoos.

His plan, then formed, of visiting successively the former Carib regions, Guiana, Trinidad, Venezuela, and, lastly, Florida, has been in great part executed, in spite of sickness and the obstacles offered by the uninhabited nature of the country, the heavy rains, and the dense forests. On the Maroni river, the boundary between French and Dutch Guiana, he found, besides Caribs and Arrowauks, Annamites and Arabs, sent over by the French government to complicate still further the ethnological problems of the future.

Dr. Ten Kate took away with him melancholy impressions of Surinam. The country, he says, is neglected in every respect, and the plantations are being abandoned one after another, and given up to the encroaching forest. The population is indolent and without energy, the greater part being creoles of every shade and color, and among them a considerable number of Jews.

From Surinam he went to Georgetown and thence to Trinidad, where he visited the few remaining Caribs dispersed in the mountains. He found them to be, like those of the mainland, hardly distinguishable from the creoles. The Guaranos, living in the delta of the Orinoco, reminded him strongly of the Surinam Caribs.

In Venezuela he rode for eighteen days across the *llanos* from Ciudad Bolivar to Cumaná.

At a place called Aguasai he found a number of Indians, who hardly knew the name of the tribe to which they belonged. The country was very poor, and this year a long drought and clouds of locusts had destroyed the crops. At Caripe he stopped to visit the grotto of Guácharo, first described by Humboldt. Dr. Ten Kate was attacked by fever on his return to Carácas and had to give up his intended visit to Florida. His collections will be divided between the Dutch and the French museums.

SOCOTRA.—This island, which was formally annexed to the British Empire in Nov., 1886, has long been under English control.

It lies in the Indian Ocean, 150 miles from Cape Guardafui and 220 miles from the coast of Arabia, in about 12° 30′ N. Lat., and 54° E. Lon. It is 70 miles long, from east to west, and about 22 broad. It is mountainous, the granite peaks on the north side rising to more than 4,000 feet in height. The coast forms a narrow plain of from 2 to 4 miles in width. The valleys are extremely fertile, but the general appearance of the land is barren; and the climate is healthful.

The chief vegetable products are aloes and dragon's blood, the former of singularly fine quality. Domestic animals are numerous, and the butter of the island is exported to the mainland.

Christianity was early established and the inhabitants thanked Albuquerque when, in 1506, he delivered them from the Arab domination. The sovereignty of the island had been claimed by the Sheikh of Keshin, a small Arabian state, and when the Portuguese withdrew his authority was re-established.

The Christianity of the Socotrans became gradually assimilated to the religion of the ruler, and early in the 18th century had ceased to exist.

The Sheikh of Keshin made a treaty with Great Britain in 1876, binding himself never to cede the island to any other power, and he really loses nothing by the extinction of his title, while England takes a position of immense importance for the control of the Suez Canal.

ORBIS IMAGO.—Under this title Dr. J. Van Raemdonck, of Saint-Nicolas (Waas), Belgium, a scholar well known by his writings on the life and labors of Mercator, has published in a handsome octavo volume a study of the unique Mapamundi of 1538, now in the library of the American Geographical Society.

This *Orbis Imago* is the first general representation of the globe made by Mercator, and his second essay in cartography. Dr. Van Raemdonck's researches enable him to speak with authority on these points; and it is but simple justice to acknowledge that the reproduction in fac-simile of this precious monument is primarily due to his earnest and eloquent representations to this Society.

The projection employed is the double cordiform, and the prime meridian passes, not, as erroneously stated some years ago, through the Cape Verde Islands, but through the Canary or Fortunate Islands. A careful examination with a magnifying glass enabled Dr. Van Raemdonck to establish this fact. The same meridian is made the point of departure on the second edition of the map, published, without a date, at Rome by Antonio Lafreri; on Mercator's terrestrial globe of 1541; and, according to Lelewel, on the maps of the Mercator Atlas.

The rescue of the *Orbis Imago* from oblivion induces

Dr. Van Raemdonck to enumerate other works executed by his countryman, and not known to exist in any collection. These are:

*Manuscript.*—1. Artistic plans, probably maps, drawn at Louvain, about 1541, for the Archbishop of Valence and the Bishop of Arras.

2. Map of lands in dispute between the Abbot of Saint-Pierre and the Prévôt of St. Bavon. Louvain, 1542, or 1543.
3. Chorography of the Duchy of Lorraine, presented by Mercator to the Duke Charles. About 1564.
4. Copy of a Map of the Holy Land in the Monastery of Our Lady of Mt. Zion at Jerusalem. Sent to André Masius, about 1567.
5. Map of Europe and the Neighboring Regions. About 1554.

*Engraved Maps.* — 6. Amplissima Terræ Sanctæ Descriptio. Folio, Louvain, 1537.

7. Map of Europe, referred to in the *Orbis Imago.* 1538.
8. Europæ Descriptio. Six sheets; four engraved at Louvain, two at Duisburg. Published at Duisburg, 1554.
9. Britannicarum Insularum Descriptio. Engraved by Mercator and published at Duisburg, 1564.
10. Europæ Descriptio. Second edition of the 1554 map. Published at Duisburg, 1572.

THE FLORA OF CHILE.—Dr. R. A. Philippi gives in Nos. x. and xi. of *Petermanns Mitteilungen*, for 1886, the results of his study of the changes wrought by man in the flora of Chile. These changes began for the most part with the arrival of the Spaniards, and have continued to operate more and more effectively ever since until now, when, as he says, the country has in many places an entirely European aspect. Tracts of land, formerly desert but for a few shrubs and bushes, are turned into wheat and barley fields, and vineyards. The pasture lands are covered principally with the succulent *alfalfa*, or lucerne, which grows so vigorously along the whole western coast of America.

Dr. Philippi finds that many native plants of Chile are identical with those of Europe, so that it is not always easy to settle the question of origin.

The maize he believes to have been introduced from Peru, probably before the time of the Incas.

The northern provinces, long condemned to barrenness on account of the dry climate, are now well irrigated and fruitful.

Many of the imported trees grow to an extraordinary size, the *Araucaria excelsa* in particular, which is planted in the *pátios* of the houses in Santiago, and towers far above the roofs, to the astonishment of strangers.

The Eucalyptus is at home throughout the country; but the foreign timber tree most commonly met with in the middle provinces is the pyramid poplar, with which the walks, or *alamedas*, so named from the tree, are planted. The most beautiful of these *alamedas* is, in Dr. Philippi's opinion, the one at Concepcion; but he adds that he has never seen any one walking in these places.

All kinds of fruit-trees succeed in Chile, the peach, the apricot, the plum, the pear, the cherry, and the apple. This last thrives in the southern provinces to such an extent that cider is the common drink. A curious incident fell under Dr. Philippi's own observation in this part of the country in 1852. In May, of that year, the Valdivia river, swollen by heavy rains, overflowed its banks, and swept away into the ocean millions of apples. These were driven by the north wind to Chiloé, where they were gathered up and made into cider.

The vine flourishes in Chile, and the wine industry is likely to grow into large proportions. Many of the vineyard proprietors are Frenchmen, who are introducing the best European varieties of the grape.

All the berries and the kitchen vegetables grow well.

Dr. Philippi's careful study closes with a detailed list of 332 plants of foreign origin, now domesticated in Chile. Of these but 99 are cultivated, many of the remainder being common European shrubs and weeds.

A DECIDED OPINION. — In the *Mittheilungen* of the Vienna Geographical Society, No. 7 u. 8, for 1886, Dr. Oscar Lenz writes of the Congo and its climate in a tone of conviction:

"The whole Congo basin, as well as the whole of tropical Africa, is, and remains, once for all, an unhealthy and dangerous land for Europeans. Men may try to cover up the fact as they will; it is of no use.

"I hold every effort to say even one word in favor of the climate to be unprincipled and criminal; meant only to entice inexperienced people into a place where they must part with all their illusions and risk moreover their health and their life. It is a matter of entire indifference whether the place is on the sea-coast or in the interior, whether the land is high or low; the climate is and remains an unhealthy climate, and he, who gets out of these regions with a whole skin, may thank his stars."

Dr. Lenz's letter bears date March 8, 1886, at Stanley-Fall-Station. His experience since that time is not likely to have made him think more kindly of the African climate.

SLAVERY AND THE SLAVE-TRADE IN EAST AFRICA.—Ludwig Stross, of Jidda, writes to the *Monatsschrift für den Orient*, of Dec. 15, 1886, a letter which ought to attract some attention.

There is but one way, he says, to put an end to the slave-trade; and that is to bring the whole of Central Africa under European rule or European influence.

Until this is done it will be impossible to prevent the export of slaves by one or another of the many routes. The forcible intervention of the English has merely had the effect of compelling the traders to find new roads.

The Sudan revolt was a movement of the slave-traders, and Gordon would have been able to master it, if he had been supported in his policy of permitting the slave-trade; but the government could not face the indignation-meetings of the good people who supply stockings and flannels for the little negroes; and so Gordon was sacrificed.

The freed negroes on the islands of the east coast have become worthless; and they ought to be made to earn their own support by some such system of control as that which the Dutch Government exercises in Java.

Herr Stross shows fairly enough the difference between slavery in Mahometan countries and that of which *Uncle Tom's Cabin* furnishes an illustration.

During his residence at Jidda he has never seen grown women imported, none, that is, beyond the age of sixteen; and the most of the slaves are children of from five to eight years. These are stolen by the traders, or bought from the tribe which has sacked their homes, or—not seldom—purchased directly from the parents.

Herr Stross himself knew of one girl in Jidda, who had been bought from her father for a bar of salt.

The slaves exported from Africa are divided into three classes:

1. *Suahelis*, a name erroneously given to all the slaves from South Africa. For these Zanzibar was formerly the dépôt.
2. *Gallas*, or so-called Abyssinians.
3. *Sudanis*, a general name which covers many subdivisions.

Up to the year 1873 everybody in Zanzibar lived on the slave-trade. On the 5th of June of that year Dr. John Kirk, English Consul-General, forced the Sultan to sign a decree putting an end to the traffic. In July, 1873, the price of a slave in Quiloa, a point of supply for Zanzibar, was 3 dollars. On the Somali coast, at the same time, the price rose from 40 and 50 dollars to 80 and 100; and the land routes, which had been abandoned, were reopened.

A similar result followed, though not to the same extent, in the Red Sea ports, the chief entrepôts for the Gallas and the Sudanis. Since 1880, the trade in this direction has increased, and in 1883 slaves, formerly held at 90 to 110 dollars, could be bought at from 40 to 60.

The Khedive's steamers formerly carried this merchandise from Suakin and Massowah to the Arabian ports.

The Sudani commerce was interrupted during the revolt, but early in 1886 great numbers of slaves were thrown upon the market. Herr Stross says it is reported that some of the families of the Europeans in Khartum have been sold into slavery, and among them the children of the Austrian Consul Hansal, who had married an Abyssinian.

Mecca is the principal market for the Sudanis and the Gallas, who are there sold to the pilgrims from every part of the Mahometan world.

The slaves captured by the English gunboats and set free are not always left to starve. Some of them have been landed every year at Jidda, turned over by the English Consul to the Governor-General, and by him distributed among his subordinates as *servants.*

Herr Stross's conviction is that so long as Mahometan lands are governed by Mahometans the slave-trade will continue to flourish, and that all the efforts of the European powers to put an end to it will be in vain.

THE MOUND-BUILDERS IN CANADA.—In the *Proceedings* of the Canadian Institute of Toronto, for November, 1886, Mr. C. N. Bell, of Winnipeg, has a paper on the Mound-Builders, whose works have been traced continuously, as he declares, "from the Mississippi below St. Anthony's Falls to Lake Winnipeg, following that line of watercourses from the Gulf of Mexico to Hudson's Bay which divides the North American continent into two great halves, east and west."

Where the halves are so great it is satisfactory to learn that there are but two of them.

A group of mounds at St. Andrew's, 18 miles north of Winnipeg, proved, when examined, to be almost identical in character with one class of those existing in the Ohio and Mississippi valleys. One was 8 ft. high, 75 ft. long, and 65 ft. wide, and overgrown with oak trees, some of them 4 ft. in circumference. On digging into this construction Mr. Bell came upon a skeleton in a sitting position and surrounded by piles of bones, each surmounted by a skull. Near the sitting figure were found shell beads, tubes of steatite, and a polished sea-shell gorget 4 in. in diameter. In other mounds there were earthern pots, stone mauls, arrow-heads, stone axes, etc., but no metal implements; while copper tools and articles predominate in the mounds on the Rainy River, 200 miles to the eastward of St. Andrew's.

Mr. Bell did not like to offer any theory as to the age of the mounds, but said there was historical evidence that at least 200 years had passed since their erection.

A Phœnician Inscription in Brazil.—The story of a learned imposture is told by Dr. Netto, director of the National Museum at Rio de Janeiro, in a pamphlet inscribed to M. Ernest Renan.

At a meeting of the Historical and Geographical Institute of Rio, on the 13th Sept., 1872, a letter was read from Mr. Joaquim Alves da Costa, of Pouso Alto, Parahyba.

This letter enclosed the drawing of an inscription on a stone, said to have been found on the writer's property. Dr. Netto, to whom the drawing was submitted, recognized the characters as Phœnician and, though not very strong in Oriental learning, undertook to translate them. There was nothing extravagant in the supposition that Phœnicians or Carthaginians had landed in Brazil, and

Dr. Netto worked at his task with energy. Its difficulties were many and great, and he became eager to see the stone itself; but to do this it was first of all necessary to find Mr. da Costa.

The name of his property, *Pouso Alto,* is one so common in Brazil that it gave no help; and to find Parahyba was not much more easy.

There are in the empire two rivers named Parahyba. One of these is in the province of Parahyba do Norte; the other flows through three of the southern provinces; and between the two regions there are 15 degrees of latitude.

Mr. da Costa was nowhere to be found.

The continued study of the inscription confirmed the suspicions Dr. Netto had begun to entertain. One phrase, *Yth alonim valonuth,* was evidently taken from the few Carthaginian words in the *Pœnulus* of Plautus; and Dr. Netto began to ask himself what Oriental scholars were known to be in Rio.

There were but five; four foreigners and one Brazilian. The Brazilian he had known for many years and did not suspect. To each of the others he sent a copy of the inscription with his translation, asking at the same time for corrections and criticisms. He compared the handwriting in the answers received with that of Mr. Da Costa.

In this way he detected the author of the mystification; and he now publishes the story, with the facsimile of the apocryphal inscriptions, because letters of inquiry on the subject still reach him from time to time.

It is well that impostors should be exposed, but men differ in their appreciation of the methods to be adopted for the vindication of the right; and the one chosen by Dr. Netto does not recommend itself.

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* Articles marked with the * are in English.

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